

IN THE CLAIMS

1. (Currently amended) A method, comprising:

forming an insulating film in a semiconductor device, wherein the insulating film has a thickness in the range of 0.3 to 2 nm; and

removing impurities from the insulating film ~~a plurality of times~~, wherein the removing impurities is performed at a temperature greater than 500°C, to form an insulating film having a prescribed thickness.

2. (Previously presented) The method for forming the insulating film in a semiconductor device of claim 1, wherein the removing impurities is performed in a reducing gas atmosphere or an oxidizing gas atmosphere.

3. (Previously presented) The method of claim 1, wherein the removing impurities a plurality of times comprises:

removing impurities in a first treatment in a reducing gas atmosphere; and
removing impurities in a second treatment in an oxidizing gas atmosphere.

4. (Previously presented) The method of claim 2, wherein the reducing gas atmosphere comprises an ammonia gas, a hydrogen gas and an inert gas, a combination comprising at least one of the foregoing gases, or plasma nitrogen, or the reducing gas atmosphere is formed in a vacuum.

5. (Previously presented) The method of claim 2, wherein the oxidizing gas atmosphere comprises an oxygen gas, a nitrogen monoxide gas, a nitrous oxide gas, an ozone gas, or a combination comprising at least one of the foregoing gases, or plasma oxygen.

6. (Previously presented) The method of claim 3, wherein the reducing gas atmosphere comprises an ammonia gas, a hydrogen gas, an inert gas, or a combination comprising at least one of the foregoing gases, or plasma nitrogen, or the reducing gas atmosphere is formed in a vacuum.

7. (Previously presented) The method of claim 3, wherein the oxidizing gas comprises an oxygen gas, a nitrogen monoxide gas, a nitrous oxide gas, an ozone gas, or a combination comprising at least one of the foregoing gases, or plasma oxygen.

8. (Currently amended) A method, comprising:
forming an insulating film in a semiconductor device, wherein the insulating film has a thickness in the range of 0.5 to 2 nm; and
removing impurities from the insulating film ~~a plurality of times~~ to form an insulating film having a prescribed thickness.

9. (Currently amended) A method, comprising:
forming an insulating film in a semiconductor device, wherein the insulating film has a thickness in the range of 0.3 to 2 nm; and

removing impurities from the insulating film ~~a plurality of times~~ to form an insulating film having a prescribed thickness, wherein the removing impurities a plurality of times comprises:

removing impurities in a first treatment in a reducing gas atmosphere; and
removing impurities in a second treatment in an oxidizing gas atmosphere.

10. (New) The method of claim 1, wherein the forming an insulating film and the removing impurities from the insulating film are performed sequentially a plurality of times until a prescribed thickness is achieved.

11. (New) The method of claim 8, wherein the forming an insulating film and the removing impurities from the insulating film are performed sequentially a plurality of times until a prescribed thickness is achieved.

12. (New) The method of claim 9, wherein the forming an insulating film and the removing impurities from the insulating film are performed sequentially a plurality of times until a prescribed thickness is achieved.